# Iowa NRCS Cover Crop Quick Reference Guide
Northwest Area

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<th>Variety</th>
<th>Latest Seeding Dates</th>
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<td>Drilled or Broadcast - Incorporated (lbs./ac.)</td>
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<tr>
<td>Buckwheat</td>
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<tr>
<td>Barley, Spring</td>
<td>60</td>
<td>9/18, 9/22, 9/22, 9/25</td>
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<td>Barley, Winter</td>
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<td>Ryegrass-sudangrass</td>
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<td>Sudangrass</td>
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<tr>
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<td>Flax</td>
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<td>Sunflower</td>
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<td>8/24, 8/26, 8/26, 8/28</td>
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## Latest Seeding Dates

* Use bulk rate for seed with a minimum of 80% PLS.
* Use rate based on PLS lbs. for all other seed.

USDA is an equal opportunity provider, employer and lender.
Annual Ryegrass
- Annual
- Recommended for advanced cover crops only
- Recommended to use a variety rather than VNS
- Can overwinter with spring control difficult
- Good at increasing organic matter
- Deep rooted
- Germination Temperature: 40 degrees
- Winter Survival: Seldom
- 190,280 seeds per pound
- Low C:N Ratio (201 – 331)
- Seeding depth: ¼ – ½ inch

Berseem Clover
- Annual
- Legume (N-fixation)
- Germination Temperature: 42 Degrees
- Winter Survival: Seldom
- 206,880 seeds per pound
- Low C:N Ratio (181 – 233)
- Seeding depth: ¼ – ½ inch

Buckwheat
- Annual
- Good for beneficial insects (flowers 3 weeks after planting)
- Enhances soil phosphorus availability
- Germination Temperature: 50 Degrees
- Winter Survival: Never
- 20,400 seeds per pound
- Low C:N Ratio (61 – 321)
- Seeding depth: ¼ inch

Cereal Rye
- Winter annual
- Good at increasing organic matter
- High water use
- Assists in weed control for subsequent crops
- Rated ‘Very good’ at scavenging nitrogen from the soil
- Germination Temperature: 34 Degrees
- Winter Survival: Expected
- 18,160 seeds per pound
- Medium C:N Ratio (141 young, 401 boot stage)
- Seeding depth: ¼ – 2 inches

Common Vetch
- Annual or biennial
- Legume (N-fixation)
- Prøstrate plan architecture (Vine)
- Common Vetch is different than Hairy or Chickling Vetch
- Attracts pollinators
- Germination Temperature: 60 Degrees
- Winter Survival: Expected
- 16,320 seeds per pound
- Low C:N Ratio (101 – 191)
- Seeding depth: ¼ – ½ inches

Cowpea
- Annual
- Legume (N-fixation)
- Germination Temperature: 42 Degrees
- Winter Survival: Seldom
- 149,760 seeds per pound
- Low C:N Ratio (161 – 191)
- Seeding depth: ½ – 1 inch

Crimson Clover
- Annual
- Legume (N-fixation)
- Easy to establish
- Germination Temperature: 42 Degrees
- Winter Survival: Seldom
- 149,760 seeds per pound
- Low C:N Ratio (161 – 191)
- Seeding depth: ½ – 1 inch

Hairy Vetch
- Annual or Biennial
- Legume (N-fixation)
- Germination Temperature: 60 Degrees
- Winter Survival: Expected
- 16,320 seeds per pound
- Low C:N Ratio (101 – 191)
- Seeding depth: ½ – 1 ½ inches

Oats
- Annual
- Good at increasing Organic Matter
- Self-pollinator (wind)
- Rated ‘Very good’ at scavenging nitrogen from the soil
- Germination Temperature: 38 Degrees
- Winter Survival: Never
- 19,600 seeds per pound
- High C:N Ratio (331)
- Seeding depth: 1 – 2 inches

Radish
- Annual
- High water use
- Does not form arbuscular mycorrhizal associations
- Rated ‘Very good’ at scavenging nitrogen from the soil
- Flowers attract pollinators
- Germination Temperature: 45 Degrees
- Winter Survival: Never
- 34,000 seeds per pound
- Low C:N Ratio (191 – 201)
- Seeding depth: ¼ – ½ inch

Rapeseed
- Good cold tolerance
- Large taproot
- High Drought tolerance
- Does not form arbuscular mycorrhizal associations
- Germination Temperature: 41 Degrees
- Winter Survival: Seldom
- 156,960 seeds per pound
- Low to High C:N Ratio (121 – 371)
- Seeding depth: ½ – 1 inch

Sorghum-Sudangrass
- Annual
- Good for silage, grazing or hayed
- Excellent for Increasing Organic Matter
- High tonnage potential
- Rated ‘Excellent’ at nutrient scavenging
- Stress conditions that limit growth (e.g., drought, frost) can contribute to prussic acid accumulation in leaves
- Germination Temperature: 65 Degrees
- Winter Survival: Never
- 17,280 seeds per pound
- Low to Medium C:N ratio (101 – 301)
- Seeding depth: ¼ – 1 inch

Sunhemp
- Annual
- Has an extensive taproot
- Germination Temperature: 42 Degrees
- Winter Survival: Never
- 15,000 seeds per pound
- Low to Medium C:N ratio (101 – 301)
- Seeding depth: 1 inch

Turnip
- Biennial
- Does not form arbuscular mycorrhizal associations
- Rated ‘Good’ at scavenging nutrients
- Flowers attract pollinators
- Germination Temperature: 45 Degrees
- Winter Survival: Never
- 192,800 seeds per pound
- Low C:N Ratio (201 – 301)
- Seeding depth: ¼ – ½ inch

Winter Camelina
- Annual
- Does not form arbuscular mycorrhizal associations
- Option to diversify winter survival mixes
- Germination Temperature: 32 Degrees
- Winter Survival: Expected
- 700,000 seeds per pound
- Low C:N Ratio (101 – 951)
- Seeding depth: ½ – 1 inch

Winter Pea
- Annual
- Large seed does not work well for aerial seeding
- Germination Temperature: 41 Degrees
- Winter Survival: Occasional
- 1,840 seeds per pound
- Low to High C:N Ratio (131 – 831)
- Seeding depth: 1 – 3 inches

Winter Triticale
- Annual
- Less aggressive growth than rye in the spring
- Germination Temperature: 38 Degrees
- Winter Survival: Expected
- 227,700 seeds per pound
- Medium C:N Ratio (201)
- Seeding depth: 1 ½ – 2 inches

Winter Wheat
- Annual
- Less aggressive growth than rye in the spring
- Germination Temperature: 38 Degrees
- Winter Survival: Expected
- 1,830 seeds per pound
- Medium C:N Ratio (201)
- Seeding depth: 1 ½ – 2 inches

Note: This is not an all inclusive list. Refer to the 340 IR for more species information.